



# UNITED STATES ARMY MANEUVER SUPPORT CENTER

## A Perspective of Future Micro Unmanned Aerial Vehicles For the U.S. Army

By

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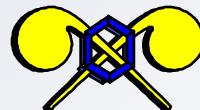
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**ENGINEER**

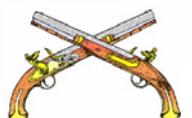


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**CHEMICAL**



**MIL POLICE**

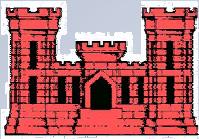


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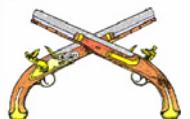
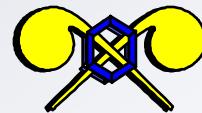


# CURRENT ARMY EFFORTS

- There is a draft requirement for a Small Unmanned Arial Vehicle (SUAV)
- We can forecast missions and operational requirements
- Advancements in Science and Technology will drive MAVs needs/requirements for Future Force with funding.
  
- Current MAV effort for Army is a 9 inch (23cm) MAV
- No formal approved Army requirement for 2-15 cm MAV
- Today not included in the Future Combat Systems strategy
- No Army funding in near future



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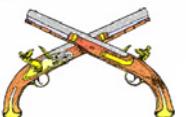
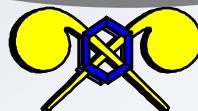
# OPERATIONAL PURPOSE

- Primary purpose is to mitigate risk
- Increase operational tempo (speed)
- Enhanced situational awareness
- Increased force protection
- To provide real time direct imagery beyond line-of-sight

Permit dismounted forces (foot soldiers) the ability to move to points of positional advantage with greater speed and precision, and avoiding enemy strengths



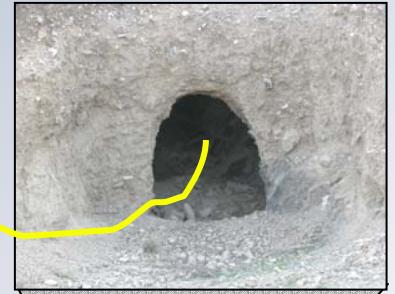
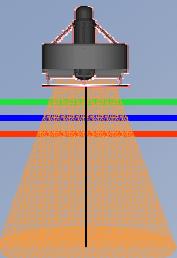
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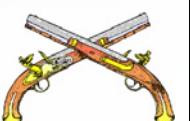


# MISSIONS

- Reconnaissance
- Surveillance
- Target acquisition
- Battlefield damage assessment
- Unit patrols
- Force Protection



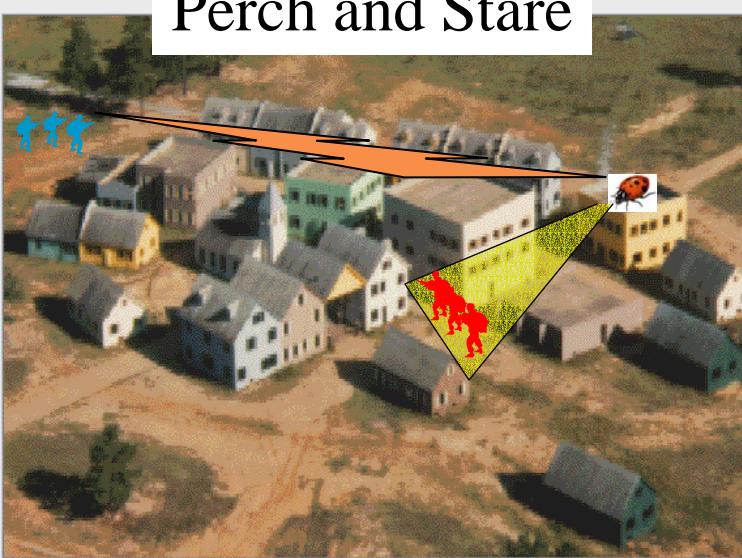
Around the corner, down  
the street, in the buildings,  
on buildings, sub terrain,  
over the hill, in the woods,  
in caves, down wells ...



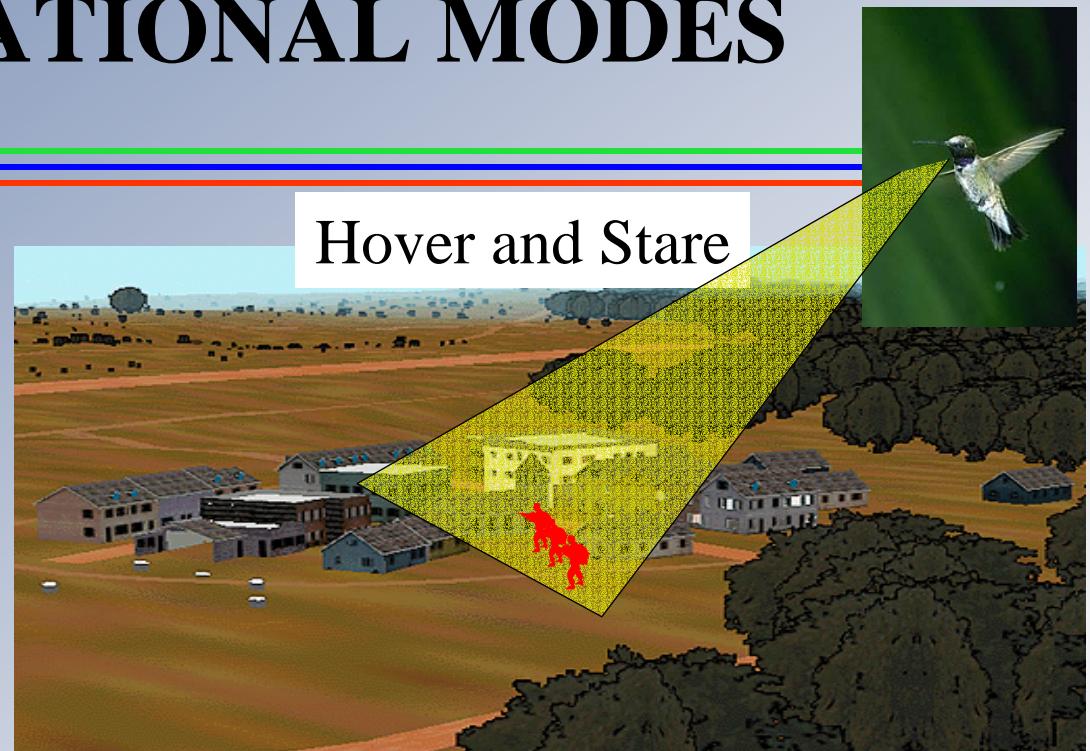


# OPERATIONAL MODES

Perch and Stare



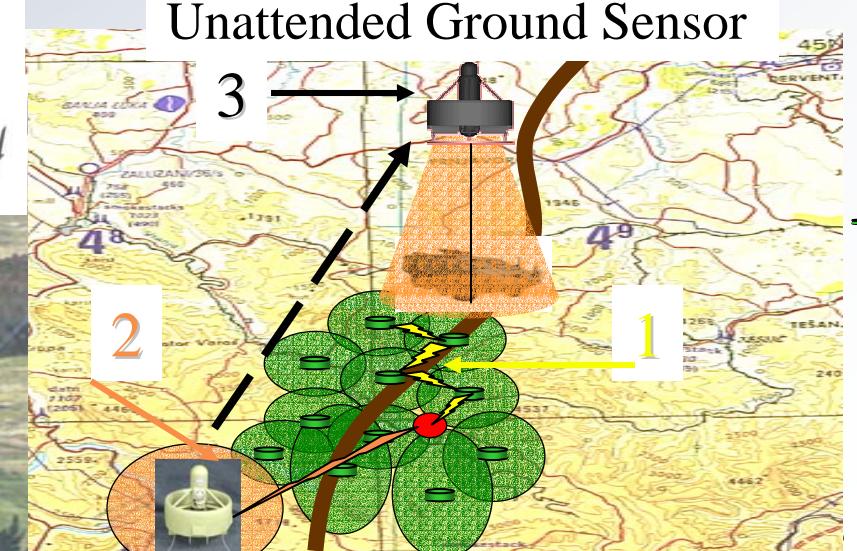
Hover and Stare



In-flight tasking for surveillance/reconnaissance



Unattended Ground Sensor



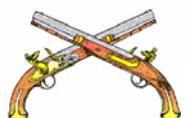
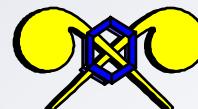


# OPERATIONAL REQUIREMENTS

- Soldier operated (no dedicated operator, ease of operations)
- Man-packable air vehicle system
- Re-taskable and reusable system
- Launch and recover in confined spaces
- Provide line-of-sight/non-line-of-sight
- Power: fuel or battery?
- Extremely quiet
- Range 5 to 8 km
- Endurance 50 minutes time on target and 70 minutes flight time
- Low cost



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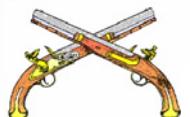
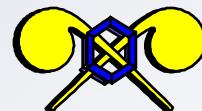
# MILITARY USERS

## DISMOUNTED SOLDIERS

- Scouts
- Infantry
- Special Operations
- Engineers
- Chemical
- Military Police



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# SENSOR PAYLOADS

- Electro Optical/Infrared (EO/IR) imagery
  - Real time direct receipt of imagery
  - Day/night imagery
- Chemical/Biological detector payload
- Zoom features

From a  
**MANSCEN**  
perspective

**Addressed in details by Mr. Mann  
of  
Night Vision and Electronic Sensors Directorate**



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